

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

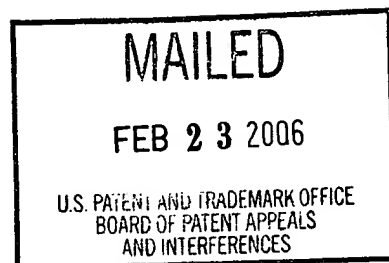
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte WAYNE M. SCHOTT

Appeal No. 2005-1883  
Application No. 09/464,867

ON BRIEF



Before DIXON, BARRY, and MACDONALD, Administrative Patent Judges.  
MACDONALD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of  
claims 1-20.

Invention

Appellant's invention relates to a loudspeaker that includes an acoustical enclosure that has an internal wall that divides the enclosure into first and second subchambers, an electro-acoustical transducer having a vibratable speaker cone mounted in an opening provided in the internal wall of the acoustical enclosure, an internal vent provided in the internal wall of the acoustical enclosure for pneumatically coupling the first and second subchambers, a first external vent provided in a wall of the first subchamber for pneumatically coupling the first subchamber to an exterior environment outside of the acoustical enclosure, and a second external vent provided in a wall of the second subchamber for pneumatically coupling the second subchamber to the exterior environment of novelty invention. In one embodiment, a ratio of the acoustic mass of the internal vent to the acoustic mass of the second external vent is in a range of approximately 3/1 to 7/1. In another embodiment, a ratio of the acoustic mass of the first external vent to the acoustic mass of the second external vent is in a range of approximately 15/1 to 30/1. In both embodiments, a ratio of the volume of the first subchamber to the volume of the second subchamber is in a range of approximately 0.3 to 2.5. In both embodiments, at least one of the internal and/or external vents can be substituted with a

passive radiating element such as a drone cone.

Claims 1 and 6 are representative of the claimed invention and are reproduced as follows:

1. A loudspeaker, comprising:

an acoustical enclosure that has an internal wall that divides the enclosure into first and second subchambers, the internal wall being provided with an opening;

an electro-acoustical transducer having a vibratable speaker cone, the electro-acoustical transducer being mounted in the opening provided in the internal wall of the acoustical enclosure;

an internal vent provided in the internal wall of the acoustical enclosure for pneumatically coupling the first and second subchambers;

a first external vent provided in a wall of the first subchamber for pneumatically coupling the first subchamber to an exterior environment outside of the acoustical enclosure;

a second external vent provided in a wall of the second subchamber for pneumatically coupling the second subchamber to the exterior environment;

wherein a ratio of an acoustic mass of the internal vent to an acoustic mass of the second external vent is in a range of approximately 3/1 to 7/1.

6. A loudspeaker, comprising:

an acoustical enclosure that has an internal wall that divides the enclosure into first and second subchambers, the internal wall being provided with an opening;

an electro-acoustical transducer having a vibratable speaker cone, the elctro-acoustical transducer being mounted in the opening provided in the internal wall of the acoustical enclosure;

an internal vent provided in the internal wall of the acoustical enclosure for pneumatically coupling the first and second subchambers;

a first external vent provided in a wall of the first subchamber for pneumatically coupling the first subchamber to an exterior environment outside of the acoustical enclosure;

a second external vent provided in a wall of the second subchamber for pneumatically coupling the second subchamber to the exterior environment;

wherein a ratio of an acoustic mass of the first external vent to an acoustic mass of the second external vent is in a range of approximately 15/1 to 30/1.

References

The reference relied on by the Examiner is as follows:

Tamura

JP 4-301998

October 26, 1992

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Rejections At Issue

Claims 1-20 stand rejected under 35 U.S.C. § 102 as being anticipated by Tamura or, in the alternative, under 35 U.S.C. § 103 as being obvious over Tamura.

Throughout our opinion, we make references to the Appellant's brief, and to the Examiner's Answer for the respective details thereof.<sup>1</sup>

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellant and the Examiner, for the reasons stated *infra*, we reverse the Examiner's rejection of claims 1-20 under 35 U.S.C. § 102, and we reverse the Examiner's rejection of claims 1-20 under 35 U.S.C. § 103.

Only those arguments actually made by Appellant have been considered in this decision. Arguments that Appellant could have made but chose not to make in the brief have not been considered. We deem such arguments to be waived by Appellant [see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

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<sup>1</sup> Appellant filed an appeal brief on November 1, 2004. The

**I. Whether the Rejection of Claims 1-20 Under  
35 U.S.C. § 102 is proper?**

It is our view, after consideration of the record before us, that the disclosure of Tamura does not fully meet the invention as recited in claims 1-20. Accordingly, we reverse.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See In re King**, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and **Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

With respect to independent claims 1 and 6, Appellant argues at page 6 of the brief, "Tamura is missing the key element of the claims, i.e., 'wherein a ratio of an acoustic mass of the internal vent to an acoustic mass of the second external vent is in a range of approximately 3/1 to 7/1' and 'wherein a ratio of an acoustic mass of the first external vent to an acoustic mass of the second external vent is in a range of approximately 15/1 to 30/1'". The Examiner responds that, "interpreting that ratio which is illustrated in figure 3 of Tamura as falling within the non-existent meets and bounds of an 'approximate' ratio, is fair." We disagree with the Examiner. First the metes and

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Examiner mailed an Examiner's Answer on February 4, 2005.

bounds clearly exist and are recited in the claims. That the term "approximately" gives some latitude to the Examiner is unquestioned. However, the Examiner must still remain within the broadest reasonable interpretation the claim limitations.

Second, the Examiner's reliance on figure 3 of Tamura is completely misplaced. Reference figures cannot be relied upon for such teachings when the text is silent as to the quantitative values in question. It is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue. **Hockerson-Halberstadt Inc.**

**v Avia Group Int'l Inc.**, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (citing **In re Wright**, 569 F.2d 1124, 1127).

**In re Wright** similarly noted:

We disagree with the [PTO]'s conclusion, reached by a comparison of the relative dimensions of appellant's and [the] Bauer [references]'s drawing figures, that Bauer "clearly points to the use of a chime length of roughly 1/2 to 1 inch for a whiskey barrel." This ignores the fact that Bauer does not disclose that his drawings are to scale. Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value.

The only quantitative value we find in the Tamura reference for the vents (ducts) is that internal duct (6) is 2.54 square centimeters by 13 cm in length. Tamura is silent as to the quantitative values of ducts (7) and (8). The only other quantitative values we find in the Tamura reference indicate

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forward with evidence or argument shift to the Appellant.

**Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claims 1 and 6, the Examiner states alternative theories in the final rejection. First, the Examiner states that Tamura, "teaches that the acoustic mass of the vent means may be adjusted ... for the purpose of 'tuning' the frequency response of the acoustic device to that which is desirable." Alternatively, the Examiner states "it is well known in the art that the size of the passive acoustic radiator ... taken in combination with the size of the sub-chamber(s) will determine the degree of attenuation of the output of the acoustic vibrations from the driver unit. (Pertinent references have been provided, below.)" As to this alternative, the Examiner has not set forth a rejection based on these "pertinent references" and

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such a rejection is not before us on appeal.

With respect to the Examiner first theory, Appellant argues at page 8 of the brief, with regard to Tamura, arranging the acoustic masses as claimed in claims 1 and 6, the effect would be virtually the opposite from which Tamura is seeking. The Examiner responds at page 8 of the answer by referring to the "Abstract" of Tamura. We find no such abstract in the reference before us. Rather, the published abstract referred to by the Examiner is a second separately published document that is not part of the current rejection. Even accepting that the Tamura reference before this panel also teaches everything the Examiner refers to in the Tamura abstract, we find no basis in the Tamura reference before us for the Examiner's further statement that "Tamura thereby recognizes a need in the art for varying the acoustic masses of said vents ... as well as the acoustic quantity of first and second cavities 4 and 5."

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

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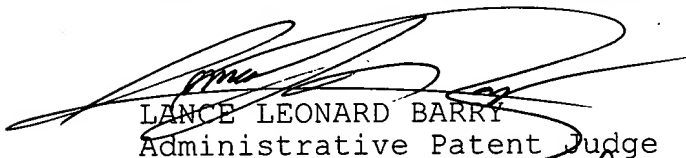
**Conclusion**

In view of the foregoing discussion, we have not sustained the rejection under 35 U.S.C. § 102 of claims 1-20; and we have not sustained the rejection under 35 U.S.C. § 103 of claims 1-20.

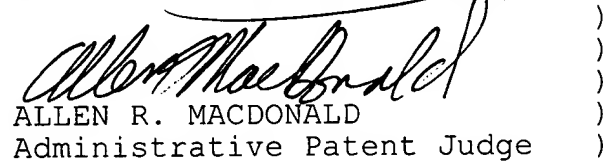
REVERSED



JOSEPH L. DIXON )  
Administrative Patent Judge )



LANCE LEONARD BARRY )  
Administrative Patent Judge )



ALLEN R. MACDONALD )  
Administrative Patent Judge )

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